II. Multiple Choice Find the answers that makes the statement true.

1. Which of the following coordinate points are solutions to the inequality $y \leq 3x - 2$?

(A) (1, 2)

(B) (1, 1)

(C) (1, 0)

(D) (-1, -4)

(E) (-2, -8)

2. If $60 - x < 20$, then x could be

(A) 10

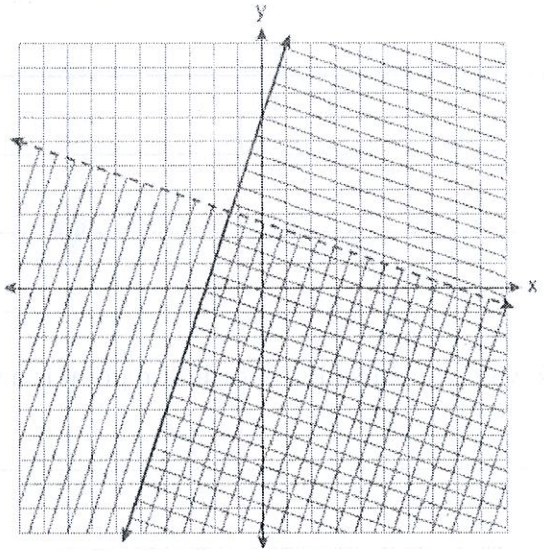
(B) 30

(C) 40

(D) 50

(E) 60

3. Which ordered pair is in the solution set of the system of linear inequalities graphed below?



(A) (4, 0)

(B) (-5, 7)

(C) (5, 3)

(D) (-7, -2)

(E) (-2, 1)

4. Which of the following are solutions to the system $y > x - 5$ and $3x - 2y < 6$?

(A) (0, -2)

(B) (1, 1)

(C) (5, -1)

(D) (6, 0)

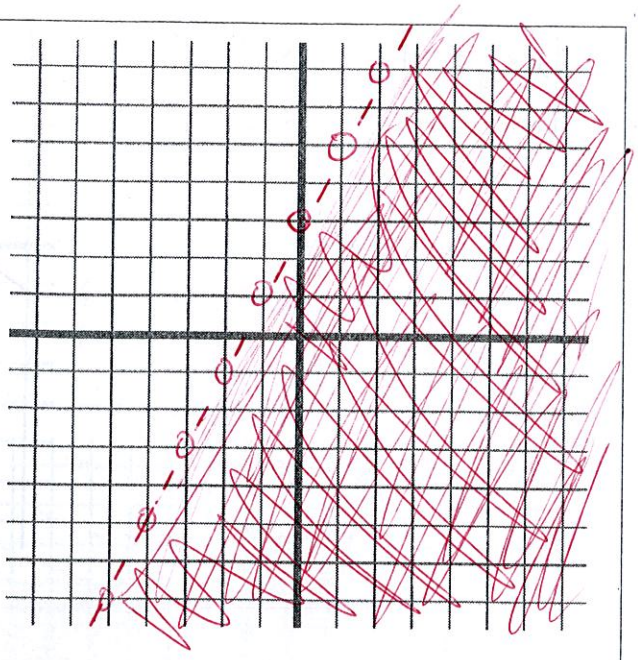
III. Free Response Problems

Solve or graph the following problems. Be careful with your lines!

5. Graph the inequality.

$y < 2x + 3$

$0 < 3$ true

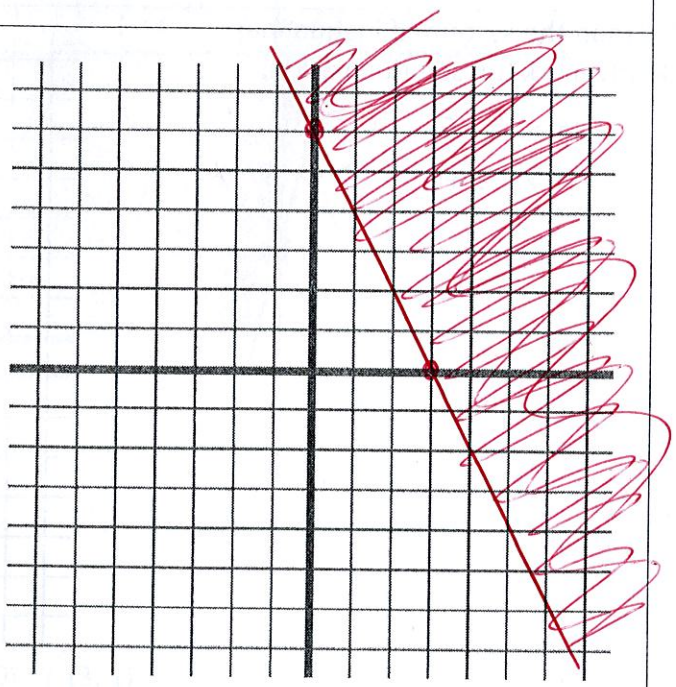


6. Graph the inequality.

$6x + 3y \geq 18$

$x = 3 \quad y = 6$

$0 \geq 18$ false

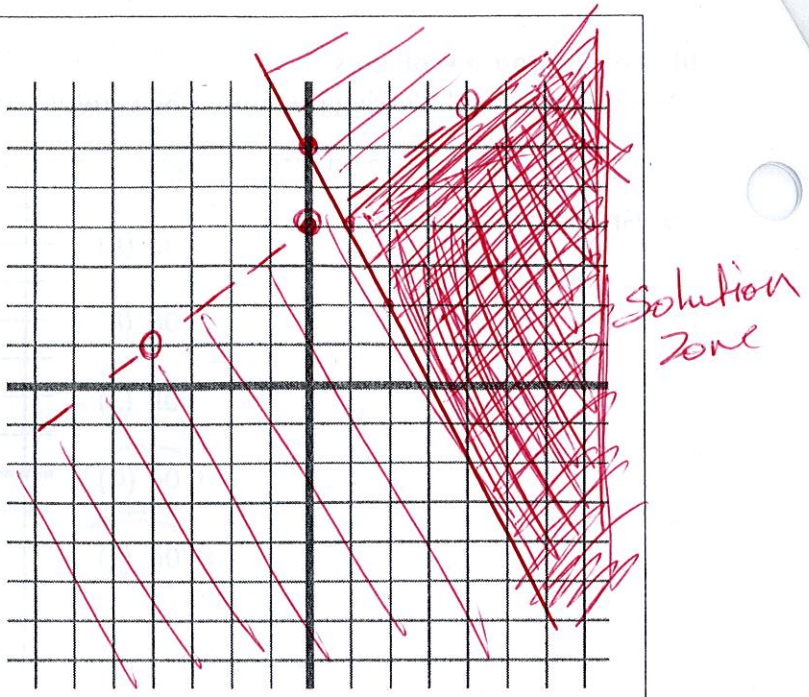


7. Graph the system of inequalities.
Clearly mark the solution region.

$$\begin{cases} y < \frac{3}{4}x + 4 \\ y \geq -2x + 6 \end{cases}$$

$0 < 4$ ✓

$0 \geq 6$ ✗

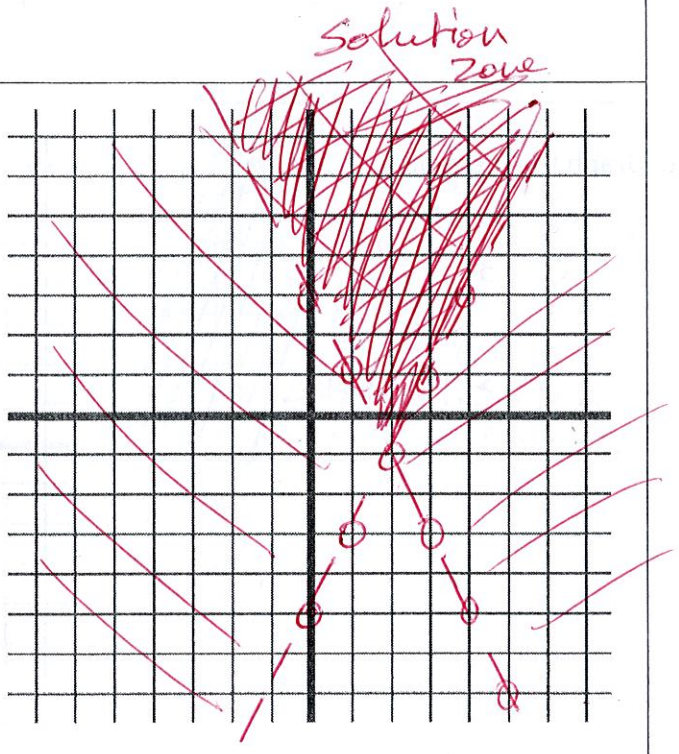


8. Graph the system of inequalities.
Clearly mark the solution region.

$$\begin{cases} y > 2x - 5 \\ y > -2x + 3 \end{cases}$$

$0 > -5$ ✓

$0 > 3$ ✗



9. Make a number line graph of each inequality.

$x \leq -8$

$x > 5$

10. Graph the system of inequalities.

Clearly mark the solution region.

$$\begin{cases} -2x + 6y < 30 \\ y \geq 4x - 6 \end{cases}$$

$0 < 30$ ✓

$0 \geq -6$ ✓

$\frac{6y}{6} < \frac{30 + 2x}{6}$

$y < 5 + \frac{2}{6}x$

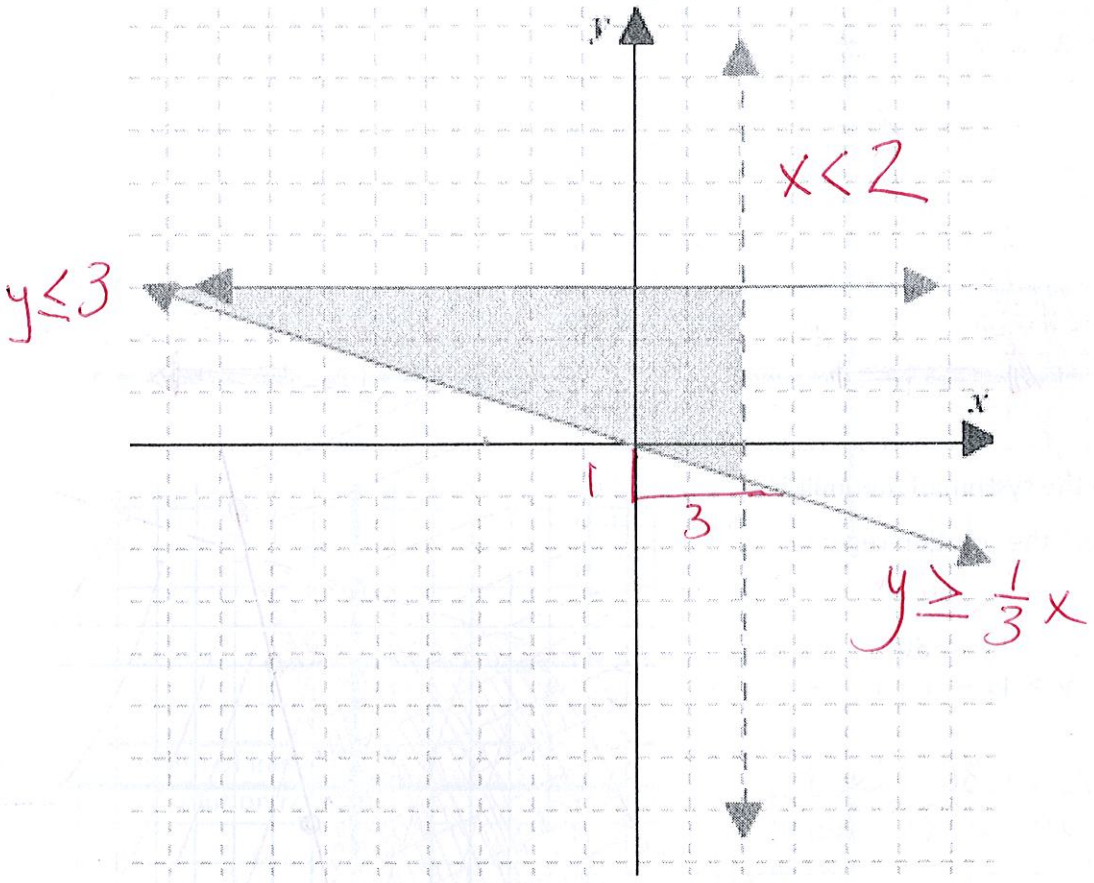
$y < 5 + \frac{1}{3}x$

11. Circle ***all*** **possible solutions** to the inequality below.

$3x - 2y < 12$

(-4, 5) (3, -2) (2, -3) (-1, 2) (0, 0) (3, 1)

12. Write the inequalities for the given system of inequalities below.



$$\begin{cases} x < 2 \\ y \leq 3 \\ y \geq \frac{1}{3}x \end{cases}$$